DOCUMENT RESUME

ED 098 648 — 88 — CS 500 898

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TITLE	The Speech of Fourth Graders in Fifteen Central Pennsylvania Schools: Phonological and Grammatical Variables.
INSTITUTION	Central Columbia School District, Bloomsburg, Pa.; Central Susquehanna Intermediate Unit 16, Lewisburg, Pa.
SPONS AGENCY	Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D.C.; Pennsylvania State Dept. of Education, Harrisburg.
PUB DATE	Jun 73
NOTE	49p.
EDRS PRICE	MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS	Educational Research; Grade 4; Grammar; *Nonstandard Dialects; Phonology; Regional Dialects; *Speech Evaluation; *Standard Spoken Usage
IDENTIFIERS	Elementary Secondary Education Act Title III; ESEA Title III; Pennsylvania

ABSTRACT

To determine both whether the speech of fourth graders designated as Title I students differs significantly in any way from that of non-Title I fourth graders and whether there are regional features in the speech of these students which would handicap their performance on a nationally standardized test, 68 children from the intermediate unit and elementary schools in six Pennsylvania school districts were interviewed. An equal number of Title I and non-Title I children was randomly selected from each school. Questioning was based on areas expected to be familiar to the informant such as childhood games, school activities, and favorite television programs. The research was divided into two parts. Casual conversation was obtained from the children and data from the first part of the study was analyzed. Games, word lists, and reading passages that were based on the children's actual speech were designed and utilized in the second round of interviews. Results revealed that there were no qualitative differences in the speech of Title I and non-Title I children, and that a few more Title I children used the more highly stigmatized grammatical forms such as multiple negation than did non-Title I children. (SW)

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THE SPEECH OF FOURTH GRADERS IN FIFTEEN CENTRAL PENNSYLVANIA SCHOOLS

PHONOLOGICAL AND GRAMMATICAL VARIABLES

Central Columbia School District
Bloomsburg, Pennsylvania

Central Susquehanna Intermediate Unit
Lewisburg, Pennsylvania

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June, 1973

Research conducted and reported herein was supported by an ESEA Title III grant (F4-72052-19-150-04-15-[2]) from the Pennsylvania Department of Education and the U.S. Office of Education to the Central Columbia School District on behalf of it and four other school districts in Columbia and Montour Counties, Pennsylvania. The larger project, of which this is a small but important part, is entitled Regional Diagnostic/Instructional Reading Norms and is being conducted by the Central Susquehanna Intermediate Unit in cooperation with the Berwick, Bloomsburg, Central Columbia, Danville and Southern Columbia Area School Districts.

CS 500 898

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THE SPEECH OF FOURTH GRADERS IN FIFTEEN PENNSYLVANIA SCHOOLS

I. Goals of the research. -- The research described in this report was conducted at the request of the Central Susquehanna Intermediate Unit in Lewisburg, Pennsylvania. The period of research began in February 1973 and ended June 30, 1973. The research was undertaken with two questions in mind:

(1) Does the speech of fourth graders designated as Title I students differ significantly in any way from that of non-Title I fourth graders in the area under consideration?

(2) Are there regional features in the speech of these fourth graders which would handicap their performance on a nationally standardized test?

Two other questions not primary to the study were also examined:

(3) Are there significant speech differences among different schools or school districts?

(4) Are there male-female differences in speech among these fourth graders?

II. Selection of subjects. -- Six school districts within the Intermediate Unit were chosen as the foci of this research. These school districts were the Benton, Berwick, Bloomsburg, Central Columbia, Danville, and Southern Columbia districts. We decided prior to beginning the research to select students from each of fifteen schools in the six districts. Since the Benton district contains only one elementary school, L. Ray Appleman School, we decided to automatically include that school in the research group. The remaining fourteen schools were randomly selected from a list of elementary schools in the five districts. The schools selected were as follows:

Berwick District: Ferris Heights Elementary
Market Street Elementary
Nescopeck Fourth Street Elementary
Orchard Street Elementary

Bloomsburg District: Bloomsburg Memorial Elementary
W. W. Evans Elementary

Central Columbia District: Scott Township Elementary

Danville District: DeLong Memorial Elementary
Fourth Ward Elementary
Liberty Valley Elementary
Mahoning-Cooper Elementary
Riverside Elementary

Southern Columbia District: Elysburg Elementary
Roaring Creek Elementary

We decided to randomly select four fourth graders from each of thirteen of the schools. Eight children were selected from Scott Township and Bloomsburg Memorial because of the large size of these schools relative to the others. The children were randomly selected from lists of students provided by the Intermediate Unit. Fourth graders were selected as the research population on the belief that the effects of child language or "baby talk" would no longer greatly affect the children's speech; hopefully fourth graders would have internalized the majority of the phonological and grammatical systems of American English. An equal number of Title I and non-Title I children was randomly selected from each school. It should be noted that the six districts do not have a uniform policy in regards to designating children as Title I recipients; each district establishes its own policy. In general Title I children were to have come from economically and/or so-called educationally deprived backgrounds. Many, as it turned out, were the subjects of special help in remedial reading. However, theoretically, and sometimes in actual practice, almost any child might receive Title I benefits it seems. As a result there was really no one thing all thirty-four of the Title I children interviewed had in common other than their Title I status. Therefore there is no distinct boundary separating Title I from non-Title I children. In addition to the four (or eight) children selected from each school, an equal number of "alternate" selections were randomly made as a pool from which replacements could be obtained if for one reason or another one of the children selected for the study was unavailable. This proved to be a valuable help in several instances. Though we encountered no absentees in the first part of our research, we did come across children who had moved since the original list had been made and also two children who refused to talk to us. The alternate selections were then utilized.

III. Interviewing Techniques

III. a. Background discussion. -- An interview format was decided upon as an appropriate means of eliciting speech samples from the fourth graders. The interview techniques were based on those developed by the sociolinguist William Labov (1966) in his urban language studies. Labov and subsequent researchers such as Shuy, Wolfram, and Riley (1967), Labov et.al. (1968), Wolfram (1969), and Fasold (1972) have used an interview format designed to elicit fairly casual conversation as well as different styles of speaking. Questioning was based on areas expected to be familiar to the informant such as childhood games, school activities, and favorite television programs. The style of speech elicited from such questions in general markedly contrasts to two other stimuli sociolinguists have used: reading passages and word lists. Both a reading passage and a word list require an informant to pay closer attention to his speech than does casual conversation; a word list focuses his attention more severely than does a reading passage. Thus Labov in his 1966 work, while utilizing five phonological variables, was able to show a steady increase in the use of standard pronunciations as against nonstandard stigmatized features as the informant moved from casual conversation to reading a short story to reading a word list. The use of all three stimuli has two important uses in research of the kind reported in this paper. First, sociolinguists have long noted that every speaker of a language shifts his speech styles as he moves from one social situation to another (see Joos 1968). To ignore this possibility in the speech of fourth graders would be to present an incomplete picture of their

linguistic abilities. Second, the linguist can include features of interest in the reading passage and the word list which may occur only infrequently if at all in casual conversation; the interviewer has greater control over a word list and a reading passage than he does over casual conversation. Fasold (1972) has expanded this notion with the use of word games. The use of these devices presented a small problem to us since we did not know in advance which items we would have liked to have included in a reading passage and a word list. This was especially important to us since we wished to get at possible regional speech characteristics. If regional features appeared in casual conversation, we wanted to be able to recheck their occurrence by including them in a word list or a short story. This difficulty was resolved by dividing the field research into two parts. First, in March we were to obtain casual conversation from the children. Second, using the month of April to analyze our data from the first part of the study, we could design games, word lists, and reading passages that were based on the children's actual speech. Then these materials were utilized in a second round of interviews in May.

III. b. First Interviews - Casual Conversation. -- Most of the questions we used are contained in the list below. For the most part these are simple questions requiring the child to elaborate if he wished:

What sorts of subjects do fourth graders take at this school?
What do you do in social studies, science, etc.?
What's your favorite subject? Why? What ones don't you like? Why?
What do you do in gym, art, etc.?
What do you do at recess? What kinds of games do kids play here?
How do you play kickball, tag, etc.?
What's the cafeteria like here? What do they serve? What's your favorite? What don't you like?
Describe your classroom to me. What can you see from the windows?
How do you get to your house from here (directions)?
What kinds of chores do you have to do at home?
Do you have any brothers or sisters?
What's your favorite TV show? Why? What happened on the last show you saw?
When's your birthday? What do you do for birthdays at your house?
Did you have a Valentine's Day party at school? What happened?
Do you have any pets? What do you do to take care of a dog, horse, etc.?
Do you have a special group of friends? What are they like? If a new kid came to school and wanted to be in your group, what would he have to do?
If you could have anything you wanted in the whole world, what would you choose? Why?

No personal questions about the child's background or family were asked. We used no set format in presenting our questions, nor did we necessarily ask all of the questions listed. Rather we followed where the conversation led. In addition to these questions, one of us used two pictures asking the child to describe the pictures. The pictures can perhaps best be described in the children's words:

> There's like a Lassie dog, and there's a bunny and a little girl sitting by the Lassie dog. She has blond hair and a white ribbon, purple and white dress. She has white shoes on, white socks, and her bunny's pink and white, and in the background there's like wallpaper that's striped pink and white, and there's curtains that are white, and like there's a bunch of flowers or somethin' back there.

> A boy caught a fish, and there's a big hook on 'im, and he has his fishin' pole. He has his blue jeans on, a striped shirt. It's black, yeah, red, white. He has brown hair. And he's happy that he caught it. And he's sittin' on a deck like of a boat.

The pictures were used as lead-ins to asking questions about activities such as fishing and about pets. As would be expected there was a great deal of variation in the children's responses and in their willingness to respond. Of course, no strange adult-child relationship is ever really casual, but many of the children were quite willing to talk, sometimes without much effort on our part. Other children were shy or reticent, choosing to give short or one-word answers. In general there were no discernible differences between Title I and non-Title I children in terms of willingness to talk to us. Perhaps the way the children were summoned to the interview influenced their willingness to talk. It seemed to us that the children were more at ease when we were allowed to visit the classrooms and escort them to the taping session than when they were summoned via intercom to the principal's office or to the area where we were taping.

III. c. Second Interview -- Word Games, Reading Passage and Word List -- The second half of the research consisted of five parts, each of which was presented to each child. The same children interviewed in March were interviewed in this section of the study. The first of the five parts consisted of Jean Berko-Gleason's pluralization game (1958). In English the Z_1 suffix or the plural marker has three different phonological realizations depending on the final sound to which the suffix has to be attached. These are /ɨz/ following sibilants as in flushes, /z/ following non-sibilant voiced segments as in clogs, and /s/ following non-sibilant voiceless segments as in mitts. The Berko-Gleason procedure tests the child's familiarity with these phonological rules by presenting words to the child and asking him to give the plural form. First, the child is shown a picture of a single object ("This is a tree."): then he is shown a picture of several of these objects ("Here is a bunch of them."). He is then asked to supply the plural form ("These are _____."). In addition to objects known to the child, several nonsense words such as gutch, lun, etc. are presented. Presumably, the child has not encountered these forms before. Thus, if he is able to give the appropriate phonological variant, it can be assumed that he has not simply memorized the appropriate form for each word he knows, but that he has internalized the general rules. Several irregular plurals such as foot, feet were included to test the child's familiarity with these. All of the words used are listed in Appendix A.

The second part is a short story originally written by an elementary school child. We have added certain words and phrases to this story to

make it appropriate for our needs. The story is presented in Appendix A. The children were asked to read the story out loud with the understanding that they had not been given time to practice it previously and that their performance need not be perfect. As there were several remedial readers in this corpus, we did not require any child who was obviously struggling with this story to complete it.

The third part focused on possible regional features of the area as obtained from the first part of the research. The children were shown pictures of certain objects and asked to name them. The pictures were drawn by Miss Anna Wheeler. The children's responses (soda or softdrink, creek or crick, etc.) give us some idea of how widespread some of these regionalisms are. It is well to note such words since it has been shown that even the inability to recognize one word on a standardized test because of regional variation can penalize the child by several points or several months of "reading age." (see Whiteman 1972, Sullivan 1972).

The fourth part involved the word list which is given in Appendix A. Two types of words were included on the list. First, words that also appeared in both casual conversation and the short story were included in order to give an index of style-shifting. Second, words that occurred frequently in casual conversation but which were not included in the short story, such as the use of pitcher for picture, were placed in the word list in order to see what the child did with them when presented in a different context.

The fifth part might be labeled the child's conscious awareness of stigmatized or regional forms. Nine sentences taken from the casual speech of the children were presented. Each contained a non-standard or suspected regional feature. Paired with each of the sentences was its standard English equivalent. The child was asked to designate sentences he would use as against which was proper or which his or her teacher would require. When appropriate, the child was asked to identify "what is wrong" with a rejected sentence in order to attempt to note his conscious awareness of stigmatized forms. These sentences are also included in Appendix A.

IV. Research Procedures. -- As noted the research was conducted in two stages. In the first stage, which was for the most part conducted in March 1973, we visited each of the schools and talked to each of the children for approximately twenty to thirty minutes. The conversations were tape-recorded using Audiotronics recorders. The child was aware that his speech was being recorded. For the total number of students per school, we each talked to equal numbers of Title I and non-Title I students. The scheduling for this research was done by Mr. Lee Wilson of the Intermediate Unit. Mr. Wilson contacted each school and obtained permission for our efforts. We allotted one day per school except in the case of Bloomsburg Memorial and Scott Township schools where we scheduled two days. We found this to be more than enough time since we were generally finished in a school in 1-1/2 to 2 hours. However, this arrangement allowed us the needed time to make same-day transcriptions of the tapes we obtained. Also this added to the flexibility of our schedule, which became important due to an unexpected school vacation in Danville and a head lice epidemic in Southern Columbia. Other than the children, we required of the schools only two relatively quiet places in which to record. We found the administrators of the schools and the fourth

grade teachers to be extremely helpful; they impressed us with their flexibility and willingness to meet our needs.

The second part of the research was conducted in May 1973. Two schools per day were visited. In this section of the research the word games, short story, and word list were presented to each of the children whom we had previously interviewed in March. It was important that the same children were interviewed in both sections in order to determine style-shifting. Also, each interviewer spoke to the same child to whom he had talked in March. Because we encountered a number of absentees, we occasionally found it necessary to revisit a school two or even three times. At the end of this period of fieldwork we had talked to sixty-seven of the sixty-eight children interviewed in March. We were unable to talk to one child, a non-Title I girl from Elysburg Elementary because she was on vacation with her parents. Only approximately fifteen minutes per child were required in this half of the fieldwork period, though in each case we tried to renew our acquaintance from March before we presented the different parts of the interview. Two children, a Title I girl from Liberty Valley, and a non-Title I boy from Bloomsburg Memorial, were unable to read the story or the words in the word list. Because of this, style-shifting data was obtained from only sixty-five of the original sixty-eight children. However, these two children did respond to the other three parts of the interview. In addition, in scheduling this half of the project, we requested from each school a sample of each child's written work. Spontaneous, uncorrected samples such as from a creative writing lesson were preferred to copywork or penmanship exercises. In doing this, we were interested in whether the child's speech characteristics were carried over into his written work. Twelve of the fifteen schools complied. In fact, teachers at four of the schools made special assignments for the children in order to accomodate us. However, samples were not necessarily provided for every child from a particular school and most of the samples we obtained were unsuited for our purposes.

V. Underlying assumptions and considerations. --

V. a. Language acquisition. -- In the sections to follow a variety of linguistic features taken from the children's speech will be described. These features are broadly divided into two groups, phonological variables, i.e., features pertaining to the sounds in the children's speech, and grammatical variables, i.e., features of morphology and syntax. The term "variable" is an appropriate one since there is a great deal of variation in the speech of these fourth graders -- as there is in the speech of every speaker of English. In addition, under each of these broad categories, a distinction will be made between those aspects of speech which relate to child language acquisition and those which are more characteristic of adult speech, especially non-standard speech. Though the assumption was made prior to the research that fourth graders would be through with most of language acquisition other than vocabulary, it was found that many acquisitional features could still be identified in fourth grade speech. Indeed as the works of Carol Chomsky (1969) and Kessel (1970) have shown, language acquisition definitely continues up until the ages ten to twelve and may continue throughout a speaker's life. This knowledge has important consequences for the researcher -- or

the teacher -- since speech forms which would be severely stigmatized in adult speech such as the substitution of /f/ for /θ/ as in frow the ball cannot be said to be socially stigmatized in the speech of a fourth grader who simply has yet to master some of the phonemic contrasts of the language or to acquire some of the grammatical aspects. Of course, the decision as to whether or not a particular form is acquisitional or simply non-standard speech is to some extent an arbitrary one, but in this report we have described as acquisitional features only language forms which previous researchers have fairly conclusively defined as such.

V. b. Standard and non-standard languages. -- There is an additional problem in distinguishing non-standard and standard forms in the speech of these fourth graders, a problem relating to the difficulties of defining a standard language.

Linguists have not been able to satisfactorily define the attributes of a standard language. English, for instance, varies from place to place and, indeed, from speaker to speaker. New England English is different from Southern English, and both differ from Chicago English. All of these contrast with British, West Indian and Australian English. Yet each form is acceptable and appropriate in its own environment. The basic difficulty in describing a standard language is in deciding whether standard means an ideal reference language spoken by no one or the most acceptable variant in use. Fasold, in a lecture in July 1972, operationally defined a standard language as that of a middle class educated person which does not call attention to itself. In this context, features of English in this research area may be perfectly acceptable in this geographical area but stigmatized someplace else. This presents a need for a follow-up study on the speech of adults in the research area. From overheard conversations of adults, including teachers and principals, it would seem that many so-called non-standard features are in regular use in this area.

However, since we have no systematic analysis of adult speech in the area to act as a guideline, we have labeled as non-standard or stigmatized only those forms which have been described as features of non-standard English by other researchers. Not all the features discussed are examples of non-standard speech, however.

V. c. Limitations of an interview setting. -- One final difficulty must be discussed before the data are presented. This is the problem any researcher has in analyzing data taken from an interview -- you don't really know what was going on in the mind of the informant during the course of the interview. This is particularly true if the informant is a child. As Cazden (1972) points out, a number of things may influence a child's response to an interviewer including his motivation, level of concentration, rapport with the interviewer, familiarity with test-taking situations, and the physical surroundings. To this might be added his attitude toward school and school-like activities and his expectations of situations like the one with which we were presenting him. Cazden says (1972:269): "Of all aspects of human behavior speech is probably the most susceptible to subtle situational influences, especially the interpersonal relationships inherent in any kind of a testing situation." This is particularly true, she says, when the informant

is at a social disadvantage vis-a-vis the interviewer, as in a child to adult relationship. There are, of course, certain cues that can alert the aware interviewer to his informant's state of mind, particularly fear or restlessness in a child. Perhaps the most prevalent situation we encountered and which perhaps most affected the flow of casual conversation was the child's interpretation of the interview as a test situation. We were careful to inform the principals, teachers, and children that we were not administering a test, that there were no right or wrong answers. Nevertheless, both teachers and principals persisted in summoning the children for "testing" (including one principal who brushed aside our protests to the contrary with "It amounts to the same thing.") For their part, many of the children approached the interview as a test and especially in the second half of the project seemed to be looking for confirmation that their answers were "correct." When we told them that what we were doing was not a test, they "knew better", especially the Title I children who had been taken out of class and tested before on several occasions. We attempted to offset this reaction by making the atmosphere of the interview as casual as possible and by trying not to give cues to the child as to "correctness." But to a certain extent we were defeated by the school situation itself. As Birren and Hess (1968:135) point out: "a great deal of the testing of children's verbal abilities has taken place in the same environment as the school situation itself, and such tests therefore register the child's reaction to the social context primarily and only secondarily his actual verbal skills." For all of these reasons we have exercised caution in drawing conclusions from our data and sometimes have completely refrained from doing so since we could not know the motivation of the child. We would recommend that the reader exercise a similar caution. Despite these reservations, many of the children did seem to respond openly and spontaneously to us. We are happy to have gathered the data that we did, and we present that data with confidence.

VI. Phonological variables. -- Though it is difficult to describe a phonological system for all of American English, we can say that all of the children interviewed are familiar with the phonemes most commonly identified in this part of the United States. There was no example in our corpus of a "reduced phonology."

VI. a. Acquisitional features. -- Several of the phonological variables which attracted our attention can be called features of child language acquisition rather than non-standard speech. Many of the children are having difficulty with mastering some of the phonemic contrasts in English, but without exception, these are all developmental problems common in child language. The term "problems" is used here to note only that a feature does not conform to adult patterns of speech. For instance, the sounds /l/, /r/, and /w/* are sometimes confused with one another giving examples such as praything for plaything, fwog for frog, caw for call, and weally for really. Twelve of the sixty-eight children displayed these difficulties, eleven of whom were Title I children. This latter finding suggests some connection between

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* By convention, slashes (/*/) will be used as the symbols for phonemic representations, square brackets ([*]) for phonetic representations, and underlining (word) for orthographic representations.

Title I status and developmental maturity. One other child, a non-Title I boy from Liberty Valley, displayed generally r-less speech. In general, however, the difficulties with /l/, /r/, and /w/ are simply examples of a child's not having mastered all of the muscular intricacies necessary to accurately produce the sounds. As Jacobson (1968) points out, the /l/, /r/, and /w/ are among the last sounds acquired in the developmental sequence. All are very similar in their articulatory properties, making it easy for a child to slip from one to another. The confusion among these sounds seemed to be a real problem only for one child, a Title I boy from Orchard Street who may need speech therapy, if he is not already receiving it.

Other sounds that were occasionally confused were /b/ and /v/, and /f/ and /θ/, thus giving bolleyball for volleyball and frow for throw. Four children confused /b/ and /v/, three of whom were non-Title I children. Another three children confused /f/ and /θ/, all of whom were Title I children. As to the /b/∼/v/ contrast, these again are sounds that are very similar in their articulatory properties. The /b/∼/v/ problem seems to be a fairly common one for children, but one which disappears as the child masters the contrast. As for the /f/∼/θ/ contrast, Palermo and Molfese (1972) note that this is one of the last contrasts mastered by children. One other child seemed to confuse /g/ and /b/ as in bogography for geography. This child, a Title I boy from the Appleman school, may also need some specific help.

We found that several children had difficulty with the sequence of sounds in the word social. Three of them pronounced it shocial [šošəl], and four pronounced it sosal [sosəl]. Sheshells and sheshore also occurred. Four of the ten children involved were Title I children. This too seems to be a common childhood speech difficulty. Dr. Michael Zarechnak of Georgetown University has pointed out that the sequence of sounds in social is one of the rarest in English. In the case of both sosal and shocial, the child has simply generalized from one to the other sound. Sheshells and sheshore are popular subjects for tongue twisters.

Other common childhood speech difficulties which we encountered were the pronunciations valentime for valentine (8 children), chimley for chimney (1 child), and liberry for library (2 children). Two of these children were Title I children. Once again, it should be noted that these phonological forms are difficulties only in the sense that the child is expected to eventually learn to control them. In any objective sense, these are probably not problems at all.

VI. b. Other phonological variables. -- Three phonological variables were selected for a quantitative analysis. These were the alternation of the interdental fricatives [ð] and [θ] with the dental stops [d] and [t], the alternation of -ing with -in', and monomorphemic consonant clusters. A quantitative analysis was considered especially important in this study since we could perceive no qualitative differences in speech among the children. That is, in general all of the children used the same forms, both standard and non-standard. However, the works of Labov and other sociolinguists have shown that speakers of a language are able to perceive quantitative

differences in the speech of other persons. (cf. Labov 1973). Thus we decided to discover if such quantitative differences occurred in the speech of our sample groups. These three particular variables were selected for three reasons:

(1) All three occur frequently in the speech of every individual, thus providing a large number of forms for analysis;

(2) All three are relatively easy to distinguish, thus making the reliability of the results fairly high;

(3) All three have been discussed in detail by other researchers, thus providing comparisons between groups.

The three variables will be discussed separately in the sections to follow.

VI. b. 1. The alternation of interdental fricatives and dental stops. -- In regard to the first set of variables, these children regularly substitute voiced dental stops /d/ for voiced interdental fricatives (/ð/ or th) in the initial and medial positions of a word. These, the, other and brother are occasionally pronounced dese, de, udder and brudder. This is a common alternation in varieties of non-standard English and in rapid standard speech as well. Much less frequently there is also an occasional substitution of the voiceless dental stop /t/ for the voiceless interdental fricative (/θ/ or th) in the same positions: thing becomes t'ing and nothing becomes nutting. When the th occurs in the final position in a word, e.g. earth, t is very infrequently substituted for /θ/. The exception to this last statement is the word with which is occasionally pronounced either wid or wit. The use of d or t in th-words is stigmatized to a speaker of standard English. The children show this by occasionally correcting their own speech. When Title I and non-Title I children were compared in their use of this alternation, some interesting results were obtained as can be seen in the data presented in Table 1 below.

TABLE 1
TITLE I AND NON-TITLE I CHILDREN

TITLE I

	Casual conversation	Short story	Word list
initial ð	3184 (83.1%)	1596 (86.7%)	130 (98.5%)
initial d	645 (16.9%)	246 (13.3%)	2 (1.5%)
initial θ	416 (94.1%)	62 (98.4%)	34 (94.4%)
initial t	26 (5.9%)	1 (1.6%)	2 (5.6%)
medial ð	412 (97.6%)	98 (99%)	---
medial d	10 (2.4%)	1 (1%)	---
medial θ	108 (87.1%)	33 (100%)	32 (100%)
medial t	16 (12.9%)	0 (0%)	0 (0%)
final θ	299 (92%)	100 (99.1%)	64 (98.5%)
final t	26 (8%)	1 (.9%)	1 (1.5%)

NON-TITLE I

initial ð	3284 (79.9%)	1510 (85.5%)	124 (98.4%)
initial d	828 (20.1%)	256 (14.5%)	2 (1.6%)
initial θ	499 (89.1%)	61 (96.8%)	35 (100%)
initial t	56 (10.9%)	2 (3.2%)	0 (0%)
medial ð	370 (96.4%)	95 (97.9%)	---
medial d	14 (3.6%)	2 (2.1%)	---
medial θ	119 (88.2%)	34 (100%)	30 (93.7%)
medial t	16 (11.8%)	0 (0%)	2 (6.3%)
final θ	302 (90.4%)	95 (97.9%)	61 (95.3%)
final t	32 (9.6%)	2 (2.1%)	3 (4.7%)

The data obtained from casual conversation, the short story, and the word list are all presented in order to demonstrate the existence of style-shifting. As can be seen, in casual conversation, Title I children in general used fewer non-standard forms than did non-Title I children. However the differences are a matter of only a few percentage points and are not statistically significant.[1] Furthermore there is evidence of style-shifting, as both Title I and non-Title I children used fewer non-standard forms as they moved from casual conversation to reading a short story to reading a word list. The shift is not a dramatic one, but it is a definite and uniform change in speech behavior. Perhaps the most interesting aspect of the data is that so few non-standard forms were used, few indeed compared to other varieties of non-standard English. (cf. Labov et.al.1968; Wolfram 1969). Only in the case of the alternation of d with th in initial position does the alternation occur with any real frequency. In fact, only seven of the sixty-eight children used d in this position more than half of the time, six of them being Title I children. However the two children with the greatest number of non-standard forms were both non-Title I children, one each from Nescopek Fourth Street and Danville Fourth Ward. The child with the fewest non-standard forms was a non-Title I child from Mahoning-Cooper School. Every child used at least a few of the non-standard forms.

This same general pattern was replicated when we compared the speech of boys and girls, as can be seen in Table 2.

TABLE 2
BOYS AND GIRLS

BOYS

	Casual conversation	Short story	Word list
initial ð	3073 (79.3%)	1558 (87.1%)	125 (99.2%)
initial d	803 (20.7%)	232 (12.9%)	1 (.8%)

[1] In this study the t-test of means was used to determine statistical significance among variables. A level of .05 was chosen as the level at which the null hypothesis could be rejected.

initial θ	406 (86.2%)	58 (95.1%)	32 (94.1%)
initial t	65 (13.8%)	3 (4.9%)	2 (5.9%)
medial ð	299 (94.4%)	96 (99%)	---
medial d	19 (5.6%)	1 (1%)	---
medial θ	99 (86.9%)	33 (100%)	30 (96.8%)
medial t	15 (13.1%)	0 (0%)	1 (3.2%)
final θ	260 (90.6%)	90 (96.8%)	59 (96.8%)
final t	27 (9.4%)	3 (3.2%)	2 (3.2%)

GIRLS

initial ð	3395 (84.1%)	1548 (85.2%)	129 (97.7%)
initial d	670 (15.9%)	270 (14.8%)	3 (2.3%)
initial θ	509 (96.8)	65 (100%)	37 (100%)
initial t	17 (3.2%)	0 (0%)	0 (0%)
medial ð	462 (99%)	97 (98%)	---
medial d	5 (1%)	2 (2%)	---
medial θ	128 (88.3%)	34 (100%)	31 (97%)
medial t	17 (11.7%)	0 (0%)	1 (3%)
final θ	341 (91.7%)	105 (100%)	68 (100%)
final t	31 (8.3%)	0 (0%)	0 (0%)

Thirty-three boys and thirty-five girls are represented by the data in Table 2. In casual conversation, girls used fewer non-standard forms than boys, but this relationship is reversed on the short story and the word list. However in all three cases only a few percentage points separate the two groups, and none of the differences are statistically significant. Again style-shifting is demonstrated.

As a final quantitative comparison, we tabulated the figures for the d th alternation in initial position by each of the six school districts represented in the study population. The results of this tabulation can be seen in Table 3.

TABLE 3
SCHOOL DISTRICTS

	Initial ð	Initial d	No. of students
Berwick	1672 (76.1%)	527 (23.9%)	16
Benton	264 (78.8%)	71 (21.2%)	4
Southern Columbia	580 (81.8%)	129 (18.2%)	8
Bloomsburg	1052 (82.8%)	218 (17.2%)	12
Central Columbia	928 (84.1%)	175 (15.9%)	8
Danville	1932 (85.8%)	330 (14.2%)	20

The highest number of non-standard forms occurred in the Berwick district and the fewest in the Danville district. This comparison was also born out on a school by school basis with the greatest number of non-standard forms occurring in the Orchard Street and Market Street schools in Berwick and the fewest in the Mahoning-Cooper School in Danville. Nevertheless, none of the differences among the districts or the schools are statistically significant. After all, only 9.7 percentage points separate the Berwick and the Danville districts.

Why then does it seem to the casual listener that the non-standard forms are more prevalent? Part of the answer may lie in another category of phonological variation related to this alternation. This is known as assimilation. Fourth graders show a marked tendency to merge the final and initial sounds of two words when the two sounds are similar. For instance this frequently occurs in sequences like and then to give anden or since the d in and is seldom realized in American English, annen. This sort of assimilation frequently occurs in rapid speech for all speakers of English, and it is difficult to label it non-standard. In addition, th-s are also lost to a final /s/ or /z/ or even /l/. All of these cases of assimilation are something different from the stigmatized substitution of d for th as in Look over dere. Instances of assimilation were tabulated separately from the sort of alternation found in the tables above. It was found that Title I children assimilated th to /n/ and /d/ sounds 664 times and to /s/ and /z/ sounds 40 times. Non-Title I children assimilated th to /n/ and /d/ sounds 820 times and to /s/ and /z/ sounds 88 times. Assimilated forms accounted for 15.6% of the potential th words in the speech of Title I children and 18.1% of the potential th words in the speech of non-Title I children.

In summary, then, there occurred no statistically significant differences in the alternation of interdental fricatives with dental stops in the speech of Title I and non-Title I children. This same relationship existed between boys and girls and among school districts. The differences that did exist showed Title I children using fewer non-standard forms than non-Title I children in casual conversation and girls fewer non-standard forms than boys. Style-shifting was demonstrated to have occurred. The low incidence of non-standard forms was compared with the children's tendency to assimilate different sounds to th-words. This low incidence might also be explained by the children "polishing up" their speech for a stranger, which if true tells a great deal about the language abilities of these fourth graders.

VI. b. 2. The -ing variable. -- -ing alternates with -in' in both standard and non-standard speech. The alternation occurs only in unstressed positions. Thus a person might say singin' for singing, but not sin' for sing. Similarly morning becomes mornin' and something becomes somethin' (or more frequently sumpin' or sum'in'), but thing only very infrequently becomes thin'. Fischer in 1958 did a study with children in which he found that boys were more likely than girls to use the -in' pronunciation and that as the interview went on and the atmosphere became more relaxed, there was a greater incidence of -in'. Sociolinguists have shown the -ing variable to be a good index of style-shifting as well as of other sociolinguistic categories. (cf. Labov et.al. 1968). Both Title I and non-Title I children in this study used the -in' form fairly frequently as can be seen by the data presented

in Table 4. In casual conversation, Title I children used the -in' form more often than did non-Title I children; this difference is statistically significant at the .05 level. Both Title I and non-Title I children used -in' more than 50% of the time as a group. In marked contrast with the d^th alternation, fifty-three of the sixty-eight individual children used -in' more than 50% of the time. The highest percentage of -in' usage occurred in the speech of a Title I child at DeLong Memorial School, and the lowest in the speech of a non-Title I child from Bloomsburg Memorial.

When Table 4 is examined for instances of style-shifting, the evidence is quite clear. There is a marked contrast in the use of -in' as the children moved from casual conversation to reading a story to reading a word list. On the short story, Title I children still used more of the -in' forms than non-Title I children, but the difference is only 6.2 percentage points and is no longer statistically significant. For the word list the findings are virtually identical for the two groups. We noticed no great differences in the use of -in' as the interview progressed. For the most part, the children used -in' throughout the casual conversation section of the study.

TABLE 4

TITLE I AND NON-TITLE I
THE -ING VARIABLE

TITLE I

	Casual conversation	Short story	Word list
-ing	226 (29.6%)	317 (89.5%)	98 (97.1%)
-in'	536 (70.4%)	37 (10.5%)	3 (2.9%)

NON-TITLE I

-ing	325 (48.9%)	334 (95.7%)	97 (100%)
-in'	339 (51.1%)	15 (4.3%)	0 (0%)

When the speech of boys and girls was compared for this variable, it was found that boys used more of the -in' form than girls as can be seen in Table 5.

TABLE 5

BOYS AND GIRLS
THE -ING VARIABLE

BOYS

	Casual conversation	Short story	Word list
-ing	260 (36.1%)	322 (92.6%)	95 (99%)
-in'	460 (63.9%)	26 (7.4%)	1 (1%)

GIRLS

-ing	301 (38.8%)	329 (92.7%)	100 (97.1%)
-in'	475 (61.2%)	26 (7.3%)	2 (1.9%)

While this would seem to verify Fischer's findings, the differences are not statistically significant, being only 2.7 percentage points. Both boys and girls used the -in' form more than 60% of the time in casual conversation. The results for the two groups on the short story and the word list are nearly identical.

The comparison among school districts for the -ing ~ -in' alternation are seen in Table 6.

TABLE 6

SCHOOL DISTRICTS
THE -ING VARIABLE

	-ing	-in'	No. of students
Bloomsburg	124 (48.3%)	133 (51.7%)	12
Central Columbia	94 (39.1%)	146 (60.9%)	8
Berwick	135 (36.5%)	235 (63.5%)	16
Benton	27 (36.5%)	47 (63.5%)	4
Danville	146 (34.8%)	273 (65.2%)	20
Southern Columbia	35 (28.8%)	91 (71.2%)	8

This data was taken from the casual conversation of the children. The school district in which there was the greatest evidence of -in' was the Southern Columbia district while the Bloomsburg district has the lowest incidence of -in'. The difference between these two districts was statistically significant at the .05 level. As for the remaining four schools, the results are nearly identical. There were no significant differences among these four schools or between them and either the Southern Columbia or Bloomsburg districts.

VI. b. 3. Monomorphemic consonant cluster simplification. -- Monomorphemic final consonant clusters are common in English occurring in such words as fast, gift, and round. They differ from bimorphemic clusters which are formed when a suffix is attached to a word such as the past tense marker on a verb, e.g. missed. Sociolinguists have focused a great deal of attention on consonant cluster simplification. Simplification occurs only when both members of the cluster agree in voicing. That is, both consonants have to be either voiced or unvoiced. Thus the clusters st, sk, nd, and pt are simplified while mp, lt, rt, and nk are not. The following environment has a great influence on the realization of a cluster in actual speech. Thus, in standard English it is perfectly acceptable to simplify a cluster when the following sound is another consonant as in last time or subject matter. However, when simplification occurs when a vowel sound or a pause follows the cluster, the process is stigmatized.

We made tabulations for consonant cluster simplification by school district, the sex of the speaker, and the Title I-non-Title I distinction. The findings for Title I and non-Title I children are given in Table 7.

TABLE 7

TITLE I AND NON-TITLE I
CONSONANT CLUSTERS

TITLE I

	Casual conversation	Short story	Word list
Cluster intact	249 (43.1%)	258 (63.9%)	207 (77.5%)
Cluster simplified	330 (56.9%)	146 (36.1%)	60 (22.5%)

NON-TITLE I

Cluster intact	309 (46.7%)	277 (67.9%)	210 (82.4%)
Cluster simplified	353 (53.3%)	131 (32.1%)	45 (17.56%)

As can be seen Title I children are slightly more likely to simplify a final consonant cluster than are non-Title I children in casual conversation. The difference is not statistically significant. The rate of simplification is quite high, over 50% in both cases. It was found that forty-four of the sixty-eight children simplified final clusters more than half of the time. The highest incidence of simplification occurred in the speech of a non-Title I child from Nescopek Fourth Street and the lowest in the speech of a non-Title I child from Appleman School in Benton. Brown (1973:398) lists consonant cluster simplification as a characteristic of child speech. This might account for the high rate of simplification. However the children are quite capable of controlling clusters as can be seen from the data from the short story and the word list. Definite style-shifting does occur, though in both cases the rate of simplification remains a few percentage points higher for Title I children.

TABLE 8
BOYS AND GIRLS
CONSONANT CLUSTERS

BOYS

	Casual conversation	Short story	Word list
Cluster intact	269 (43.3%)	261 (65.4%)	209 (81.1%)
Cluster simplified	352 (56.7%)	138 (34.6%)	49 (18.9%)

GIRLS

Cluster intact	287 (46.3%)	274 (66.3%)	208 (78.9%)
Cluster simplified	333 (53.7)	139 (33.7%)	56 (21.1%)

Table 8 gives the tabulations for simplifications in the speech of boys and girls. In casual conversation, boys are more likely to simplify a cluster than girls, though again the difference is only a few percentage points. Style-shifting does occur. In fact on the word list, boys were less likely to simplify a cluster than girls.

When tabulations were made by school district, as seen in Table 9, the converse of the relations for the -ing~-in' alternation was found. In this case, the highest incidence of simplification was in Bloomsburg while the lowest was in Southern Columbia. The differences were statistically significant at the .05 level. Again, the remaining four districts were all within a few percentage points of each other.

TABLE 9
SCHOOL DISTRICTS
CONSONANT CLUSTERS

	Cluster intact	Simplified	No. of students
Southern Columbia	71 (59.7%)	48 (40.3%)	8
Berwick	140 (49.1%)	145 (50.9%)	16
Central Columbia	111 (47.6%)	122 (52.4)	8
Danville	162 (43.9%)	207 (56.1%)	20
Benton	22 (40.7%)	32 (59.3%)	4
Bloomsburg	77 (34.4%)	137 (65.6%)	12

In a study of consonant cluster simplification, it is important to determine the phonological environment in which the simplification occurs. Thus we tabulated consonant clusters in casual conversation according to whether a consonant, vowel, or pause followed the cluster and the effect this may have had on simplification. The results for the boy-girl groups and the Title I-non-Title I groups can be seen in Table 10.

TABLE 10
CONSONANT CLUSTER SIMPLIFICATION BY ENVIRONMENT

	Intact			Simplified		
	Vowel	Consonant	Pause	Vowel	Consonant	Pause
Title I	96(70.7%)	95(25.1%)	54(78.2%)	40(29.3%)	272(74.9%)	15(21.8%)
Non-TitleI	118(73.7%)	110(29.1%)	66(74.2%)	43(26.3%)	273(70.9%)	23(25.8%)
Boys	105(72.5%)	104(26.4%)	57(74.1%)	40(27.5%)	290(73.6%)	20(25.9%)
Girls	109(71.3%)	101(22.9%)	63(76.7%0	43(28.7%)	255(77.1%)	18(23.3%)

The same pattern holds for all groups. Simplification is most likely to occur preceding a consonant while the cluster is most likely to remain intact preceding a vowel or pause. As noted earlier, this approximates the general pattern of standard English.

The factor of environment can be seen in tabulations made from the short story and word list as well. In these cases we also made tabulations on two bimorphemic clusters, desks which occurs in both the story and the list, and slept which occurs on the list. In regards to the story the highest incidence of simplification occurred with the word next which was simplified 52 times out of 63 times. Next is a difficult word in that it contains a sequence of three consonants, [nɛkst]. In addition, it was followed by a consonant in the story. Two of the next four highest cases of simplification were in words with a consonant following: just walked and lost my. The other two were desks and ask. Clusters with a vowel or a pause following were seldom simplified in the story, e.g. rest of, 2 out of 65 times, and lost its, 5 out of 65 times. The two bimorphemic clusters, in slept and desks were the only words in the word list which were frequently simplified. Desks in particular is a difficult word for the children -- and for many adults. This was seen in the pluralization word game and in casual conversation as well where the forms deskes, desses, and desk all occurred for desks. The -sk clusters in general may be difficult for the children given the high frequency of simplification for ask.

VI. b. 4. Summary of quantitative analysis. -- The results of the quantitative analysis of the above three phonological variables are varied. It was found for instance in casual conversation that Title I students simplified consonant clusters more often than did non-Title I children, but that they used fewer non-standard forms in the d~th alternation. Neither difference was statistically significant. However, the Title I children did use significantly more of the -in' form of the -ing variable than did non-Title I children. While the incidence of the non-standard forms in the d th alternation was low, especially compared to other groups studied in the U.S., the incidence of the other two variables was relatively high. However, incidences of occurrence of all the stigmatized forms dropped sharply as the children shifted styles from casual conversation to reading a short story to reading a word list. Both Title I and non-Title I children were proficient style-shifters, and in the more formal styles of speech, the incidence of use of non-standard forms was nearly identical for both groups. It was also found that there were no significant differences between the speech of boys and girls on these three variables, a finding which is somewhat surprising in the light of studies previously done, but one which has been replicated by more recent studies (cf. Fasold 1972; Minderhout 1973). Boys were slightly more likely than girls to use the non-standard forms, but this was a matter of a few percentage points. Both boys and girls were able to style-shift. Among the school districts it was found that the Berwick, Benton, Danville, and Central Columbia districts were very much alike for these three variables, with the two remaining, Southern Columbia and Bloomsburg differing on the -ing variable and consonant cluster simplification. In general, however, the finding that stands out is that there were no great differences among the sample populations in regards to these variables.

VI. b. 5. The deletion of syllables and words. -- The fourth graders we studied showed a marked tendency to delete certain syllables and words, especially unaccented syllables. All sixty-eight of the children deleted unaccented initial syllables. This process of deletion is fairly common

in English for all speakers for such words as 'cause, 'till, and 'round. The children regularly deleted such words as well as others which carry a greater stigmatization:

'rithmetic	'spensive	'scribe	'leven
'cept	'stension	'sposed	'sketti
'speriment	'partment	'freshments	'rase
'lectric	'xactly	'frigerator	'mergency

Both Title I and non-Title I children used these forms.

In addition to the deletion of unaccented initial syllables, other deleted sounds we occasionally encountered were in I 'on't know and I don' know for I don't know, and the pronunciation dint for didn't. Both of these forms are familiar features of non-standard English. (cf. Fasold and Wolfram 1970:69). There was also the interesting pronunciation Ber'ick for the town of Berwick, a pronunciation which we also heard frequently in the speech of adults in the area. Occurring much more frequently was the pronunciation sum'in' for something. Here the deletion of the medial /θ/ occurred in the speech of forty-two of the sixty-eight children.

Another frequently deleted sound was the th in initial position in a number of words, especially, them, e.g., I took 'em (the cats) to the corner. This sort of deletion occurred 512 times in the speech of Title I children and 575 times in the speech of non-Title I children. Boys were significantly more likely to delete initial th-sounds (626 times) than were girls (461 times). Another frequently deleted sound was the h in him as in I hit 'im (the boy).

There were also occasional instances of the deletion of entire words as in They found this money that they robbed the bank and It be easy to rip out. Such deletions were not nearly as widespread as the deletion of sounds, occurring for the most part in the speech of only a few individuals.

VI. b. 6. Homophones. -- During casual conversation with some students in Bloomsburg we noticed that pairs such as write and rate; white and wait were homophones. For this reason, these four words were included on the word list. If a child read the two different words to sound the same, we could be sure of the 2 pairs of homophones.

white~wait. -- Seven (of 67) children or 10% read these two words exactly the same. The children were distributed in Benton (1), Bloomsburg (2) and Berwick (4) districts. Four additional children read these two words so they sounded very similar. Each child came from a different district: Benton, Bloomsburg, Central Columbia and Danville.

right~rate. -- We did not encounter any truly homophonous pairs with these two words. Perhaps this was due, to a great extent, to the fact that rate was unfamiliar to many of the children. However, seven children (15%) had a very similar pronunciation. These children came from all districts but Danville.

We have not attempted an intricate phonetic analysis of the vowel system of the area. However, it seems to us that 10% of the students read white and wait the same. This holds implications for teachers of reading. Pronunciations such as these call for evaluation of the usual homonyms given in teachers' guides to see if they really "work" for students in this area. For some students, new pairs will have to be added.

VI. b. 7. Additional phonological variables. -- In this section we have included a number of items which are linguistically interesting, but for the most part are too few in number to be discussed under their own heading. For instance, one thing we noticed was the pronunciation sting-ger [st ŋ r] for stinger in the story. Though only six of the children out of the sixty-five who read the story used this pronunciation, it is perhaps significant that all six children were from Berwick, three from the Market Street School, two from Ferris Heights, and one from Orchard Street. Two of the six were Title I children, and all six were girls. In itself this pronunciation is not too surprising as a certain confusion exists in English over this matter as in singer and finger. A similar instance occurred only twice in casual conversation, both in the speech of non-Title I children, one each from Ferris Heights and Bloomsburg Memorial.

Another pronunciation problem that seems to occur in the speech of children is the pronunciation pitcher for picture. Over half the children used the pitcher pronunciation in casual conversation. When the words pitcher and picture were included on the word list, forty-one of sixty-five children used the pitcher pronunciation. Twenty-four were Title I children. Three children reversed the situation, giving picture for pitcher on the word list.

An interesting pronunciation was cousint for cousin and cousints for cousins. Nine children used the cousint pronunciation in casual conversation, two being Title I children. Because this form was so interesting, we included it on the word list. On the word list twenty-eight out of sixty-seven responding used the cousint pronunciation. Seventeen of them were Title I children, and eleven were non-Title I; eighteen were girls and ten were boys. The cousint pronunciation occurred in every district. This uncommon form may very well be a regional feature. It is difficult to see the phonological processes at work on this feature. A related example which occurs in the children's speech is the pronunciation secont for second. Here though the non-standard pronunciation is easily explained by the devoicing of a final stop, a not uncommon phonological process. Cousint is one of the most interesting findings of this study. We also heard recort for record and acrost for across, the latter occurring several times.

Other pronunciations that caught our attention were ketch for catch, git for get, and wrassle for wrestle. All of these pronunciations occurred occasionally in casual conversation. When the three words were included on the word list, only the ketch pronunciation occurred with any real frequency, i.e., eighteen out of sixty-five times or 27.9% of the time. Ten Title I children and eight non-Title I children used the ketch form; boys and girls were equally divided in their usage, nine and nine. Seven children

used the git pronunciation or 10.4% of the total. Those seven were divided into four Title I and three non-Title I children, five boys and two girls. The wrassle pronunciation occurred only five times (7%), but it is interesting to note that all five of the children who used it were boys. Four were Title I children. All three pronunciations were fairly well scattered throughout all of the districts except Benton where none of the forms occurred in our samples. Of course, the word list calls for the most formal of the styles of speech, and the incidence of occurrence of these pronunciations is probably much higher.

The pronunciation of interest which was most widespread occurred in the word houses. In most areas of the United States, house is pronounced with a voiceless sibilant, /s/, in the singular and a voiced sibilant, /z/, in the plural. These fourth graders varied from that pattern by using the voiceless sibilant /s/ for both the singular and the plural. When houses was included on the word list, 87% pronounced this with a /s/, 13% with a /z/. This pronunciation occurred in all of the school districts. It may be that this is a case of generalizing or regularizing an irregular pattern on the part of the children. It would be interesting to determine whether or not adults in the study area used the /s/ pronunciation.

Several of the children substituted a schwa /ə/ for a final /o/ in words such as piano, tomato, and potato. Orthographically this situation could be represented as pianə, tomatə, and potatə (or 'tatə). This substitution occurred throughout the area under study. There were also several children who epenthesized a schwa between the syllables of such words as family, Acme, and struggling to give the pronunciations fămŭly, Acŭme, and struggŭling. Because of this we included the word film on the word list since the pronunciation filŭm is sometimes heard in parts of Pennsylvania, but none of the children chose that pronunciation. Many of them, however, misread film as flim.

Another set of forms that should be mentioned are ones such as gonna for going to, wanna for want to or wanted to, kinda for kind of, etc. While these forms are stigmatized to language perfectionists and prescriptive grammarians, the fact is that nearly all, if not all, speakers of American English use these forms. Words such as gonna frequently occurred in the children's speech (52 of 68 children) as did wanna, kinda, gotta, gimme, offa, inta, onta, usta (used to), getcha, sorta, stard (started to), wouldya, dya (do you), and accounta. Since the use of these words would not call attention to the user's speech in most social situations, the realistic approach to them would be acceptance rather than stigmatization.

Several other items should be mentioned in this section, though none occurred with any frequency. Among these are anmal for animal (Title I boy, Appleman), kidses for kids' (Title I girl, Liberty Valley), 'Lizabes for Elizabeth (non-Title I girl, Market Street), clot for culotte (non-Title I girl, Bloomsburg Memorial), perty for pretty (several children), and perfesser for professor (non-Title I boy, Mahoning-Cooper). Also of interest was the placement of accent in the words striped (2 children) and drowned (2 children). Five children also used the word youse in reading the short story. Two of the five were Title I. There were no occurrences of youse in casual conversation.

VII. Grammatical variables. --

VII. a. Acquisitional features. --

VII. a. 1. Regularized irregular forms. -- We also noticed a number of grammatical features which can be considered a part of child language acquisition. Among these are the regularization of irregular forms. Within the corpus, there were numerous examples of verb forms which would usually be considered "mistakes." However, it is most important to determine what kind of error the child is making. For example, certain usages which adults would term improper, are simply results of immaturity on the part of the child's language development. Since such a problem will eventually correct itself as the child grows, hours drilling to correct this sort of problem might be more fruitfully spent.

The English language contains many irregular forms. Palermo and Molfese state that researchers (1972) have consistently found that initially, children seem to acquire irregular forms by rote memory. As cognitive development increases, they begin to generalize. By fourth grade, children have learned to use the -ed for the past tense and past participle of regular verbs. It seems quite reasonable that this familiar pattern would be extended to new verbs. This sort of generalizing is also taking place when a child says badder and baddest, not yet having learned irregular comparatives and superlatives.

The following list shows a number of normally irregular verbs which have been regularized by the children. The examples are of a wide variety, from both boys and girls as well as Title I and non-Title I children.

REGULARIZED IRREGULAR VERBS

drawed	sended	sleeped
buyed	sticked	holded
weared	builded	stinged
	blowed	

At ten years of age, this sort of overgeneralization seems rather normal. It is most likely that as the children grow, they will be exposed to and learn these irregular verbs without extreme attention on the part of educators.

A few of the children used brang and brung. Neither are these usages unusual as a child is acquiring English. Again, this seems a generalization from a pattern familiar to the children. Virtually all English verbs that are spelled with -ing in present tense form (there are approximately ten) form their pasts in -ang and -ung. Of course, -ing,-ang,-ung is an irregular verb form in English. But it does seem quite likely that fourth graders knowing such verbs as sing,sang,sung; and ring,rang,rung; might generalize this pattern to the verb bring.

In using tooked and ranned, the two children were using past tenses but even made these fit what seems to them to be the way to make pasts. -Ed has been added.

There were also a few examples of "tooken." At present, we can only conjecture what might be going on inside a child's head to produce the utterance tooken. This usage might indicate that the children have remembered that the past participle of take ends in -en. In terms of English irregular verb endings, tooken may be said to approximate taken more closely than tooked.

The preceding type of errors, involving regularizing of irregular forms demands the thought process of generalization. As such, these forms show that children are growing cognitively. If the children are exposed to irregular verbs used properly in the speech of adults around them, the proper forms will eventually be learned.

If, as an educator, one is interested that students be able to produce standard verb forms, the following "errors" deserve close attention since it is probably less likely that a child will "outgrow" these usages. We have defined "standard English" as the sort of language used by educated speakers, which does not call attention to itself. Although a judgment, we believe that the verb structures on the lists below would be "stigmatized" in most schoolrooms.

Lack of past participle	Use of present for past
have it tore down	She run the lights
It got broke	
She got ran over	Past participle for simple past
would've/could've/has went	
could've took	We seen
must've did	

In a classroom setting, saying, for example, "I seen you..." would probably be inappropriate. Children whose speech consistently includes stigmatized forms like those in the above list can profit by help from their teachers. That is to say, teachers can help the children to learn to style-shift. Although one "style" of speech may be perfectly acceptable for use with friends on the playground; another style is used in class; and possibly yet another style at home. This does not mean that one style is better than another. Rather, language should be gauged by "appropriateness." And educators should define the appropriate style for the context of school.

None of the above examples occurred in Central Columbia nor in Benton. This is probably a result of the smaller number of students interviewed. These were the only two districts in which we talked to children from only one school.

Within the casual conversation of the children interviewed there were occurrences of burnt (up and down), smelt and scairt. These usages are viewed neutrally. Although the interviewers do not use these forms, burnt, smelt and scairt were considered acceptable. In many grammars proper usage may be either of two alternate forms. As one example, use of either dreamed or dreamt is quite acceptable. Possibly this usage is regional but more data would be necessary before any conclusions could be drawn.

VII. a. 2. Pluralization. -- In 1958, Jean Berko conducted some interesting research to determine whether four to seven year old children had yet learned the three different ways to form English plurals. The correct plural for regular English nouns is determined by the final sound of the word. There are three choices. The first, an /ɨz/, is used to form the plural of words ending in sounds called sibilants, /s,z,š,ž/, as in the words classes, noses, wishes and garages; or words ending like watch /č/ and package /ǰ/. Another choice for a plural, a /s/, is required after words ending in the following sounds: /p,t,k,f,θ/. Examples of words ending in these voiceless consonants are maps, bats, sticks, cuffs and piths. The third type of plural, /z/, appears after all the other sounds, such as dogs and beds. Of course, one does not think of all this before he pluralizes words. It should be automatic. Berko (1958) as well as Anisfield and Tucker (1967) who were working with six year olds, found that children made more errors with plurals requiring the /ɨz/ form than those plurals requiring /s/ and /z/. We wished to find out how the fourth graders in this area, who were nine and ten years old, compared with previous studies.

The sounds involved, /s/,/z/ and /ɨz/, all fall within the articulatory abilities of the children. What was really in question was whether or not the children had internalized the system for forming English plurals. That is, hearing a word such as "birch," would a child automatically realize he must say "birches."

We chose fourteen nouns. Two were pluralized with /s/: sticks and desks. The /z/ plurals included two real items, cans and plums; as well as two make-believe nouns, luns and shugs. By including items which were new and unfamiliar to the children, we could be sure that the plurals had not just been memorized. If the children could produce plurals to words they had never before heard, we can assume that they have "internalized" the system for pluralization.

Because the /ɨz/ ending has been found to be difficult, a large number of words requiring this were included. Dresses, houses, dishes and churches were the real words; gutches and nizzes were imaginary. Finally, two irregular plurals which are familiar items, sheep and feet, were included.

We had pictures of the singular and plural of each item on note cards. The interviewer conducted this word game by showing the singular card and saying, for example, "This is a tree." Showing the plural picture, the adult then said, "Now here's a bunch of them. These are _____." The child filled in the plural. Procedurally, there was very little trouble. All of the children caught on quickly and were amazed that the exercise was so simple.

/s/. -- The plural of stick proved troublesome for only two Title I girls from Danville. One pluralized stick as stick (plu.); the other as stickes. However, the plural of desk was difficult for 40% of all the students interviewed. The final cluster of sounds is rather difficult to pronounce since it involves three sounds, /sks/, which do not occur frequently in English words. The plural was improperly formed by 21 Title I students and 16 non-Title I students. There were 20 boys and 17 girls from all six districts who had trouble with this plural. Five plurals other than desks were used by the children: deskes (14), desk (11), dess (8), dests (2) and desses (2).

/z/. -- Only the two imaginary items posed problems for some youngsters. One Title I boy from Berwick said the plural of lun is lun. The remaining 66 students formed this plural correctly. However, the plural of shug was said to be shuges by three children and shugses by another. Of these four children, three were Title I students and three were girls. They are students from Danville and Berwick schools. Failure to form the plurals of lun and shug properly probably indicates that these children have not yet fully internalized the English system of pluralization.

/ɨz/. -- The common plurals of dresses, houses, dishes and churches were quite easy for the children. One child, a Title I boy from Bloomsburg, formed the plural of dress as dress but this was the only instance of an improper plural. To the unfamiliar items, however, responses varied. Eleven children said the plural of niz was niz. The group was pretty evenly divided as to sex, while eight of the children were Title I students and three were non-Title I. These children came from every district but Central Columbia.

Students came up with four different ways to pluralize gutch. Twelve children from all six school districts formed this plural incorrectly: gutch (6), guts (4), gushes (1) and /guzɨz/ (1). Ten of these students were Title I students.

Irregular Plurals. -- An overwhelming majority (73%) of all the students said the plural of sheep is sheeps. The 49 students are fairly evenly divided sex-wise as well as the ratio of Title I to non-Title I. Below is a listing of occurrences.

TABLE 11
USAGE OF SHEEPS

1. Appleman: 3 of 4/ 75%
2. Ferris Heights: 4 of 4/ 100%
   Market St.: 4 of 4/ 100%
   Nescopek 4th: 1 of 4/ 25%
   Orchard St.: 4 of 4/ 100%
3. Bloom. Mem'l: 7 of 8/ 88%
   W.W. Evans: 2 of 4/ 50%
4. Scott: 6 of 8/ 75%
5. DeLong: - - - -
   Fourth Ward: 4 of 4/ 100%
   Liberty Valley: 4 of 4/ 100%
   Mahoning-Cooper: 3 of 4/ 75%
   Riverside: 2 of 4/ 50%
6. Elysburg: 3 of 4/ 75%
   Roaring Creek: 2 of 3/ 66%

Likewise, the plural of foot was improperly formed by 42% of the children. Nineteen of the 28 were Title I students.

These "mistakes" are seen as positive by the interviewers. This systematizing of irregular plurals seems to be consistent with our other findings. (See section on regularizing of irregular verbs.) Cognitively, these fourth grade children are reaching the stage where they are beginning to really make their language work for them. Although we do not know what is going on inside the heads of these children, it is obvious that their minds are trying to make rules which produce consistent answers, as with the plurals

above. It's very logical that if one is a sheep, then two should be sheeps. Unfortunately, language is not logical. Within the next year or so, as the children increase their cognitive skills, there should be manifest changes in their language development as well. Irregulars will be firmly learned during that time.

VII. a. 3. Additional acquisitional features. -- We also noted a general lack of passive constructions in the children's speech, a feature which other researchers have pointed to as characteristic of child speech. That is, children tend to say The car hit her rather than She was hit by the car. There were only four occurrences of the passive voice in the corpus. Cazden (1972:249), however, cautions against drawing too many conclusions from this sort of data as she believes that passive constructions are also rather rare in adult speech. The passive voice may be primarily a feature of the written language. There were three occurrences of passives in the children's written work.

Pronoun confusion also is a feature of child language. Chomsky (1969) was able to show that children are not always able to sort out the referents in complex sentences when a number of pronouns are involved. These fourth graders presented us with the same sort of difficulty:

> He asked him did your other doctor give you a prescription, and he said yes, and he didn't have it filled out, and he said get me my wallet out of my pants, and so he went over and got it out, and he said five hundred, my five hundred dollars are missing.

This "confusion" exists only in the mind of the listener; the child is probably quite clear who "he" is, and an alert listener is often able to sort out the referents by the use of a variety of cues. As they get older, many children take the listener more into consideration.

When we began this project it seemed to us that life was one long run-on sentence for a fourth grader:

> It's about, there's these three girls, and he's a colored guy, and there's this other guy, and the last time I saw it, this guy, he come in one day and hurt his back, and he was in a wheelchair, and they were havin' a show and for him, and he didn't know about it, and it was some kind of horse race, and he bet on one, and he won.

However, since having become acquainted with the work of Kellogg Hunt (1970), we have found that the use of and as a connective is expected behavior for a child of fourth grade age. Hunt studied the use of connectives among several age groups and found that fourth graders use and three times as frequently as eighth graders and four times as frequently as twelfth graders. Since fourth graders don't use more complex connectives, Hunt concludes that "It may be conjectured that fourth graders feel the need to form larger constituents but have not yet acquired the syntactic means for doing so in a more mature way." (1970:26). Of course, we had no set of groups with which we could compare the speech of fourth graders. However, we did compare the frequency of occurrence of and with three other common

connectives, but, because, and then. We found that these fourth graders used and more than four times as often as the other three connectives combined. Non-Title I children used more and's (3267) than Title I children (2868) with non-Title I children averaging 96.1 and's in the course of a conversation to Title I children's 84.3. Similarly girls used more and's (3316) than boys (2819) with girls averaging 91.8 and's per conversation, and boys, 85.4. These figures, of course, may simply reflect the fact that non-Title I children and girls talked more than Title I children and boys, since all groups used roughly the same proportion of but, because, and then. (Also, there were more girls than boys.) The predominance of and carries over into the children's written work. Overall, the general pattern of syntactic constructions for these children is a series of sentences of simple rather than complex construction in active voice without embedded clauses, all of which are tied together with and's.

Fourth graders also show that they have not mastered the use of many words or constructions in English such as only, either...or, each, some, usually, and always. These are examples of the child's not being familiar with the semantic field of a particular item. As a result, sentences such as the following occur:

They give each of some people some money.
...only unless sometimes...
She comes up or either I have...
That's why they only wanted to play.
I get two dollars every week, but when I babysit I only get five.
But sometimes we always check your work.
Well, you can, but sometimes you usually don't.

The placement or use of words in a sentence can sometimes yield interesting results, too:

When she ever comes...
They always play so lot they forget.
Put it up how high you want it.

It is possible that these sorts of examples merely represent performance errors on the part of the children, but also it seems entirely probable that the child has not gained complete control of his language.

VII. b. Other grammatical variables. --

VII. b. 1. Multiple negatives. -- A great deal of research has been compiled on multiple negation in non-standard varieties of English. (cf. Labov et.al. 1968; Fasold and Wolfram 1970). This research has shown that multiple negations are not illogical as some have said, i.e., two negatives don't make a positive in the case of language. Rather where the standard speaker uses one negative marker to express the idea of negation, the non-standard speaker may use two or more negative markers. There is no doubt in the mind of another person used to hearing multiple negatives as to the intent of the speaker. Nevertheless, multiple negatives are normally described as being stigmatized speech. This was seen in the children's reactions to multiple negations in the linguistic insecurity section of the report.

(see below). One little girl at Ferris Heights told me that her class was working on multiple negations, trying to put just one "no" in a sentence. "That's hard", she said, "Some kids are havin' a lot of trouble." This girl, a non-Title I child, did use multiple negatives in her speech. Twenty-six of the sixty-eight children used fifty-two multiple negatives in their casual conversation. Fifteen of these were Title I and eleven were non-Title I. The twenty-six were equally divided between girls and boys. The highest individual frequency of occurrence was seven in the speech of a Title I girl from Elysburg. All the districts except Benton were represented. Caution must be exercised, however, in the use of quantitative data for syntactic features. Syntactic features simply do not occur as often as phonological variables, and it is difficult for the interviewer to control for their occurrence. To a certain extent we believe that most of the children use these different syntactic features, but that the features simply did not emerge in the twenty to thirty minutes in which we were talking. Some examples of multiple negations taken from the children's speech are:

> She don't have no match.
> Nobody couldn't get it no more.
> They didn't have no clothes on.
> I can hardly think of nothin' I don't like.
> She don't hardly have to do nothin' cause she don't really do anything.

Multiple negations are an extremely variable phenomenon in the children's speech, and it must be noted that children who used multiple negatives also negated other sentences as in standard English.

VII. b. 2. Pronominal appositions. -- While pronominal appositions of the type, My father, he are generally considered stigmatized speech, most speakers of English use them. Little research has been performed on pronominal appositions, though it seems that the appositions may be acceptable in one circumstance and not in another. For instance, the number of words intervening between the referent and the pronoun seems to have an effect on acceptability. Fasold once tested the sentence That man that I met on the train to Chicago last week, he turned out to be a Congressman for acceptability with a class of university graduate students, and none found it ungrammatical. (in Fasold and Wolfram 1970:84). The fourth graders use a lot of pronominal appositions. Fifty of the sixty-eight used 267 of the forms, an average of more than five per child. The overwhelming number of the forms occur in the third person singular (216 of 267 or 80.9%) with 45 in the third person plural, 4 in the first person plural, and 2 in the third person singular possessive. Occurrences in the first person singular are unlikely, and probably occurrences in second person are also quite rare. Of the fifty children who used pronominal appositions, twenty-five were Title I and twenty-five were non-Title I, while thirty of the fifty were girls. The highest individual total occurrences was twenty-two in the speech of a non-Title I girl from DeLong Memorial. Pronominal appositions occurred in all six districts, and probably occur in the speech of all these fourth graders.

VII. b. 3. Subject-verb concord. -- There were many examples in the corpus of a lack of agreement between the subject of a sentence and the verb as well as the absence of tense markers such as the third person singular concord marker in she eats. While these may possibly be acquisitional features we have chosen to discuss these phenomena as examples of non-standard speech. Thirty-one examples of the absence of the third person singular marker (Z_3) were used by twenty-one of the children, sixteen of whom were Title I. Some examples are:

He bite everybody.
When the music go off...
My Mom don't believe in parties.

The use of don't as opposed to doesn't was the most frequent example of Z_3 deletion, accounting for twenty-one of the thirty-one examples. This was found to be a highly stigmatized feature for the children in the linguistic insecurity section of the research. (see below).

Another frequently occurring feature was the use of the third person singular form was with first, second, and third person plural subjects:

I's sittin' in the back drawin'.
We's playin' with his mini-bike.
The peaches was theirs.

There were eleven examples of this phenomenon with a third person plural subject by ten children, six of whom were Title I children. There were also eleven examples of we's by five children, four being Title I. There were five examples of I's by two children, both Title I, and finally one example of you was by one non-Title I child. A possibly related usage was the form alls as in Alls you gotta do is sing. Five children produced the form alls.

There were also fourteen examples of a child adding a third person singular marker to a verb which didn't call for such a marker. Eight children were involved, four of whom were Title I. Five of the fourteen examples were instances of gots as in I gots a guinea pig. Other examples were:

My mom lets me wears pants.
We always bes it.
We makes stuff.
It doesn't sticks to shiny stuff.
It has deskes, as all classrooms does.

For the most part these are probably examples of the child's overgeneralizing the pattern for the Z_3 marker.

In addition there were thirteen examples of a plural subject paired with a singular verb as in My chores is... Ten children were involved in this case. Eight of the thirteen examples involved a compound subject of the type My grammy and my uncle and my mom... and in two other cases,

a clause intervened between the subject and the verb. Both of these constructions might have caused some confusion on the part of the child as to the appropriate form of the verb.

None of the above types of phenomena occurred as frequently as they do in other varieties of non-standard American English.

VII. b. 4. Additional grammatical variables. -- Related to the Z_3 marker are the Z_1 or plural marker and the Z_2 or possessive marker. Both the Z_1 and Z_2 markers are frequently deleted in some varieties of American English. Only seven examples of the deletion of the plural marker occurred. Six children were involved, three of whom were Title I. Four of the seven examples involved the word kind as in They wear different kind of clothes, while the other three examples all involved the use of reflexives as in We were by ourself. The children simply may not have gained control over the properties of kind or reflexives as yet. Only one child deleted the possessive marker, though he, a non-Title I child from Fourth Ward, did so consistently throughout the time we talked to him. Two interesting performance errors involving the Z markers were How much of bag of grains we have and Other's team point.

Nine children made use of what we have called the narrative present. In other words, the child told a story that occurred in the past as if it were occurring in the immediate present. For example, in speaking of an old episode of a TV program, a child said:

He comes in the door and says, "Okay, where's the gold?"

The use of the narrative present is a common feature in many if not most varieties of American English. A concomitant of the narrative present in some varieties of English is the deletion of the Z_3 marker to give He come... There were only a few examples of this phenomenon in this corpus.

Three children used dummy-it constructions in casual conversation. In other words, a child would use It's a ball here instead of There's a ball here. Because of these three occurrences we included an example of dummy-it in the linguistic insecurity section of the project.

Another interesting feature of the children's speech was the use of verbal fillers, especially tags such as and stuff like that. Such tags often occurred at the end of a list where an adult might say etcetera. However, the tag often signaled that the child couldn't think of anything more to say about a particular item or that he didn't care to say anything more. It may also have signaled a lack of available vocabulary items. The tags were interesting in that almost every child used them and that a particular tag would be used by most of the children from a particular school. Among the tags we encountered were:

And stuff - 28 children	And things - 2
And stuff like that - 17	Or something - 1
And all that - 15	Stuff like - 1
And that - 6	And so - 1
And everything - 3	All kinds of stuff - 1
And all that stuff - 2	And junk - 1

The children also peppered their speech with verbal fillers such as like and you know, as is common in American English.

The confusion among the forms lie~lay and sit~set presented difficulties for 10 of the children, five of whom were Title I. While the substitutions of lay for lie and set for sit are common in American English, the let~leave is more localized, occurring primarily in different parts of eastern Pennsylvania. There were two examples of the let~leave phenomenon in the corpus, both by Title I children. These examples were:

They wouldn't leave me help.
Mom don't leave me do that.

Among the other items of interest was the use of got for have as in I don't got very many. Six children used this construction, five of whom were non-Title I. There were only two examples of ain't which may reflect the children's interpretation of the interview situation as a school-like activity. One girl at Liberty Valley said They higher it for They raise it. Another girl at Mahoning-Cooper had an interesting tag at the end of sentences which consisted of a repetition of the subject and main verb of the preceding sentence, with a pronoun often replacing the noun in the subject. Examples were:

Momma doesn't hurt 'em, she doesn't.
He comes over to us girls, he does.
Probably he was hungry, he must have did.

A more widespread item of interest was the substitution of best for favorite when we asked the children about their favorite food or TV show. Often the response was My best show is...

VIII. Vocabulary items. -- The fourth section of the second more structured interview involved five vocabulary items. The children were shown colored pictures of a lollipop, a bottle of softdrink, a creek, a lunch box and a refrigerator. The procedure was simply to ask the child to identify the picture. The first response was considered the most heavily weighted. But, when children stated that they used more than one name, this was noted.

The lollipop and lunch box were included because both items are familiar to children. We wanted to see if there would be any variation within the area on what these two items are called. In certain geographical areas a Coke may be called a softdrink, pop or soda. We wished to find out which term was used in this area. During the casual speech interview, some children said "creek" while others said "crick." We were anxious to see if this varied by district; or to see if we would be able to determine why some children pronounce the word differently from others. A refrigerator was included because one boy, while conversing, referred to the "ice box." We wished to see if this term was generally used.

Lollipop. -- For the first picture the children replied lollipop and sucker. In all but two schools, children volunteered that they sometimes use both terms. However, few children were able to tell what the difference

is, if any, between a lollipop and a sucker. One girl at Scott Elementary said that the "round ones" are lollipops and the "flat ones" are suckers. A boy at the same school gave just the opposite response. He eats flat lollipops and round suckers. The following are the tabulations for the first item.

TABLE 12

ITEM #1

District	Total Responses	LOLLIPOP	SUCKER
Benton	4	4	-
Berwick	16	12	4
Bloomsburg	11	7	4
Central Columbia	8	6	2
Danville	20	17	3
Southern Columbia	7	7	-
	Totals:	53	13

The initial response of 53 students was lollipop, while 13 said sucker. Neither term seems to be used exclusively throughout the entire area.

Soda. -- Three terms were used for the second item: soda, softdrink, and pop. Soda was overwhelmingly the most popular name. It would probably be safe to say that soda is the term used regionally in this area of central Pennsylvania.

TABLE 13
ITEM #2

District	Total Responses	SODA	SOFTDRINK	POP
Benton	4	3	-	1
Berwick	16	15	-	1
Bloomsburg	12	11	-	1
Central Columbia	8	8	-	-
Danville	19	13	4	2
Southern Columbia	7	7	-	-
	Totals:	57	4	5

Fifty-seven children (or 86% of the total) use soda. It is also interesting to note that all four occurrences of softdrink were in Danville. Of these four, two were from Liberty Valley, one from DeLong and one from Mahoning-Cooper.

Lunch Box. --

TABLE 14
ITEM #3

District	Total Responses	LUNCH BOX	BASKET	PAIL	BUCKET	CAN	KIT
Benton	4	1	-	3	-	-	-
Berwick	16	8	-	6	1	1	-
Bloomsburg	12	6	-	6	-	-	-
Central Columbia	8	3	-	4	-	-	1

TABLE 14 (Continued)

District	Total Responses	LUNCH BOX	BASKET	PAIL	BUCKET	CAN	KIT
Danville	20	12	1	5	2	-	-
Southern Columbia	7	4	-	-	1	2	-
	Totals:	34	1	24	4	3	1

These results indicate that lunch box and lunch pail are the most frequently used of a rather large number of terms.

Creek. --

TABLE 15
ITEM #4

District	Total Responses	CREEK	CRICK
Benton	4	3	1
Berwick	15	9	6
Bloomsburg	12	9	3
Central Columbia	8	7	1
Danville	20	11	9
Southern Columbia	7	6	1
	Totals:	45	21

The majority of the students responded with the word creek. However, one wonders if these responses ring true. Generally, the term crick is thought to be rather bucolic. Some of the children seem aware of this for quite a number of students who said "crick" in casual conversation, said "creek" when their attention focused on the word alone. (See section on Word List)

All but one of the schools' responses were divided between creek and crick. At Elysburg, all three children responded creek. From this sampling we cannot make any definitive statements other than that both creek and crick are used throughout the area.

Refrigerator. -- Without exception, all 66 of the children called this item a refrigerator. (Actually, some said "fridge," and most of the others said " 'frigerator.")

Speaking of vocabulary, there were some humorous examples of children using vocabulary items inappropriately. Since children are still learning the language, they are continually trying out new words. Most of the errors involved the children's use of a similar-sounding word.

A girl at Ferris Heights told us she studied about "Henry the Ape" in history.

One youngster at Scott Elementary related:

> An' we had ducks that we liked a lot but Grandma, she didn't like 'em just because they was in the pond. She thought they was ruining the pond like. She thought it was but it wasn't. It was, um, allergy. Allergy -- well, fish die and it gets polluted...it won't hurt ya...an' when you get out...ya turn green. Allergy and algae do sound almost alike.

But, by far the most elaborate example occurred at Riverside School. A boy mentioned "bald chicken" as his favorite food. It was not until we discussed the interviews afterward that we were able to make connections. It seems "scalloped" chicken is served at Riverside. A second girl had said she like "scalpt" chicken. The boy had taken it a step further. Since scalped and bald were synonymous to him, he renamed the dish "bald chicken."

IX. LINGUISTIC INSECURITY. -- The very last section of the second interview with each child we called "Linguistic Insecurity (and/or regionalisms)". The exercise included ten pairs of sentences. One of each pair was the actual utterance of a child taken from taped casual conversation. The child's sentence was the non-standard or supposed regional feature. Being the last of the exercises, it was hoped that a rapport between the interviewer and child would have been solidified by that time. After practice in a sample, the interviewers read the two sentences and the child, having been asked to listen carefully, chose the one he thought he used when he spoke. As can be imagined, the dynamics in this section were spectacular. A number of children who had been comfortable, imperceptably stiffened at the mention of "there isn't a right or a wrong answer." Where had they heard that before? After this section, we felt that there were very few naive and trusting children in the group. One could feel an unuttered "I knew it was coming."

In retrospect, it was probably very unwise to have multiple negation as the first set, for the children were immediately aware that one example was non-standard and considered unacceptable in school. But for all the mistakes we made, some extremely interesting results appeared.

For example, a child might have said, "them meatballs" while talking, yet have chosen "those meatballs" during this section of the interview. Possibly the child actually may be unaware that he uses "them." But also, he may be quite aware of the social situation, realizing that one is preferred and choosing the "proper" way rather than the way he talks. As interviewers, we tried to remove most of the pressure by making the children feel at ease, neither cueing the children nor reprimanding. But there was, for a number of students, a great anxiety in this section. These anxious children are our concern in this exercise. For children who chose responses different from the ones they used in casual conversation, we might say there is a linguistic insecurity. Perhaps, "awareness" might be a better wordthis awareness is consistent with what we found to be a sensitivity to social situations and an ability to style-shift from casual speech to reading of a short story to the word list.

Of the non-standard sentence pairs, the first involves multiple negation. Students were asked which of the following they would say if they were talking:

(NS) She didn't say nothing. OR
(S) She didn't say anything.

Of the 67 children who were involved, 17 chose the first, or non-standard form. The 17 were divided rather equally. There were eight boys and nine girls. Ten of them were Title I students. Of more importance, however,

is that 16 of the 50 who chose the standard sentence, were taped using multiple negatives in their casual speech. There were eight girls and eight boys. In fact, the boy who had originally uttered the non-standard sentence was one of these. He said he didn't use multiple negatives. Of these 16, four of the students were from Berwick; four from Bloomsburg; two from Central Columbia; five from Danville; and two from Southern Columbia. Benton had none although two students there had originally said they used multiple negatives in speaking. It is interesting to note that at least 49% or almost half of the students use multiple negatives.

(S) The gorilla saw him.
(NS) The gorilla seen him.

There were fifteen students scattered throughout all six districts who said they used the NS form. Ten or 2/3 of these were Title I students. There were ten girls and five boys. There were only five "insecure" students in this group. Perhaps the great contrast between five on this item and 16 on the multiple negation indicates that the latter is more stigmatized. Of these five, three were Title I students; three were girls; and students came from Berwick, Bloomsburg, and Danville.

When asked whether they would say:

(NS) I like them meatballs. OR
(S) I like those meatballs.

24 of 65 children chose "them meatballs." The groups were fairly evenly divided between Title I and non-Title I students; and boys and girls. Children from all six districts chose the non-standard. There were, in addition, seven children who chose the standard although they used the non-standard when speaking casually. Since such a large number so freely chose "them meatballs", it would appear that the usage of them instead of those is not seen as heavily stigmatized by the children. "Them meatballs" was chosen by 31 (or 48%) of the children.

The fourth pair included a non-standard usage in which the subject and verb did not agree in number:

(NS) We was playing.
(S) We were playing.

Nineteen children chose the first sentence. Of the 48 who chose the standard form, six used the NS in casual speech. Four of these children were Title I students. Five of them were boys. Non-standard usage occurred in all six districts.

(S) My dad doesn't like too many dogs around.
(NS) My dad don't like too many dogs around.

For this pair of sentences, eight children chose the non-standard. Of the 59 remaining who said they used the standard form, 12 had actually

used the non-standard while speaking. One girl, when asked why she wouldn't say "My dad don't..." said "Because it don't sound right!"

The final non-standard sentence was to have explored whether the dummy-it was used by many children. There were only four children who said they would say "It's a ball here." rather than "There's a ball here." The children came from four different districts. Two were Title I students. Three of the four were girls.

TABLE 16
LINGUISTIC INSECURITY

NS	Using NS	No. Insecure	Title I	Non-Title I	Girls	Boys
1. didn't-nothing	49%	16	11	5	8	8
2. seen	29%	5	3	2	3	2
3. them	48%	7	4	3	2	5
4. was	37%	6	4	2	1	5
5. don't	29%	12	8	4	5	6
6. It	6%	0	2	2	3	1
	Totals:	46	32	18	22	27

Caution must be exercised in evaluating what the figures in Table 16 might indicate. The numbers are valid only as gross indicators. For example, almost half of the children have indicated (by admission or actual speech) that they use multiple negatives. The dummy-it, in contrast, is minimally used. However, the column stating the number of students who are insecure does offer some valuable information. The numbers 16 (for multiple negation) and 12 (who spoke with constructions like "dad don't" but said they use the standard) are quite a bit larger than the other totals. It is probably safe to assume that these two usages are the most highly stigmatized for fourth graders. Perhaps a great amount of school time is spent on these two usages. More refinement of this "linguistic insecurity" measurement is required before any other sound conclusions can be drawn.

It is of interest that 32 of 50 (or 64%) of the non-standard usages were spoken by Title I children. There does not seem to be any significance between the numbers of girls and boys (22 girls and 27 boys). Below is the tabulation of "insecure" responses by school:

TABLE 17

School	# Responses from Students		Insecurity Index (by district)
1. Appleman	2	2	50% (Benton)
2. Ferris Heights	2	2	
Market Street	1	1	
Nescopek	3	3	50% (Berwick)
Orchard Street	2	2	
3. Bloomsburg Mem'l	6	4	
W.W. Evans	2	1	41% (Bloomsburg)

TABLE 17 (Continued)

School	# Responses from Students		Insecurity Index (by district)
4. Scott	6	3	37% (Central Columbia)
5. DeLong	5	4	
Fourth Ward	4	3	
Liberty Valley	2	2	70% (Danville)
Mahoning-Cooper	3	3	
Riverside	2	2	
6. Elysburg	3	1	
Roaring Creek	4	2	43% (Southern Columbia)

That a child says one thing yet chooses another may be indicative of a number of things. Such children are obviously aware that one response is preferred in a "school situation" which the interview situations were. Such awareness is positive since the child is learning to style-shift. Hopefully this awareness is nurtured by understanding teachers and not at the expense of the child's home language, if different from that of the school.

X. REGIONAL USAGES. -- Three pairs of sentences were included to assess how wide spread were certain usages that seemed potentially regional to the interviewers.

ON/ABOUT. -- A girl from Mahoning-Cooper talked about studying "on the heart." In response to studying on or about "the heart," only 10% of the 67 students chose on. The areas of the seven respondants was confined to Danville (3) and Bloomsburg (3 from Bloomsburg itself; 1 from Scott School). Incidentally, the girl from Mahoning-Cooper who used on five times in casual conversation chose about when asked which she says.

DARESN'T. -- There were two examples of daresn't in the taped casual conversation. 30% of the children said positively that they use "daresn't." We are quite sure that this 30% is minimal since when asked if "daresn't" was ever used at their school, quite a number of children admitted they or their friends did. From children's comments, many teachers in the area are quite critical of children's using "daresn't." For our part, "daresn't" is a perfectly good English word. That children should be afraid to use it is damaging. Time would be more profitably spent correcting obviously non-standard features, such as multiple negations, rather than "daresn't" which is merely regional. "Daresn't" is used in all six school districts.

BORROWED OFF/FROM. -- Only 34 children were asked which they would say:

> We borrowed it from our neighbor.
> We borrowed it off our neighbor.

18 (or 53%) of those asked would say "borrowed off." This usage seems spread over the entire area since there were occurrences in all the five districts where we asked children. (However, we did not ask children in Danville since we only decided to include this after we had finished the Danville schools.)

A child may study on or about; say daresn't; or borrow off or from someone. All of these usages are acceptable.

XI. EDUCATIONAL IMPLICATIONS. -- A great number of small items have been enumerated in this report which are extremely valuable for educators.

It was amazing to us what bubbling conversationalists the majority of these children were. However, it usually took non-school topics to get them going. The interviewers learned so many things about marbles in Berwick (which seems to be the only district where this game is played), about the flood, jumping ropes, goats and many other things that are all important in the lives of the nine and ten year olds. If one listens, children have much to say.

A number of teachers during our research told us that it was unfortunate we had taken their poor students. However, we were interested in language and all sorts of students can talk.

Preschoolers can talk, so we usually say they "know" English. And, previously most research has concentrated on younger children. For all the abundant conversation of the fourth graders, when we analyzed the speech of these children, we were amazed to find how much they have yet to acquire. It's really mind-blowing to think that after ten years of total immersion in English, the children have so much to learn. One can really begin to appreciate what an intricate and complicated system language is.

A number of problems these fourth graders had with language have been mentioned in the body of this report. It is most imperative for educators to be able to distinguish types of language problems. Of course, there are actual physiological impairments or other problems of this type which should be referred to a speech therapist. These are not of extreme concern here. In reference to language development, however, it may be difficult to make the less obvious distinction between maturational problems, which will, for the most part, eventually correct themselves, and other problems with which many children will need the teacher's help.

We have mentioned that children of this age improperly use all sorts of "irregularities" in their language. They say "the baddest kid I ever knew;" or "I buyed some whole crocks last night;" or "sheeps." But, it's not because they haven't been exposed to irregular verbs, plurals, etc., in school studies as well as in the speech of older people around them. Why then haven't they learned the irregulars? Children seem to learn the regularities first, which makes sense. There is no extensive system behind most irregular forms.

Obviously, at fourth grade, the children are still regularizing irregular forms. When they are cognitively ready, they will learn the exceptions and irregular forms. Since these will be learned by imitation and memorization, it is important that children be exposed to proper language. But, it seems, that excessive drill on many of these items in the primary grades is unnecessary.

A child may talk of "bolleyball" and "valentimes" and he's thought cute. But if he says "I ain't got none" he's looked down on. It's rather

obvious that some features of speech are socially stigmatized. The children should be taught this. Often times, a child with stigmatized features is simply classified "lower" and left there.

Many people may think that children lack the social awareness to change their speech even if they would be taught differently. But, as we have found in this report, children are extremely sensitive to changes in the social situation. We found great differences in the styles of speech children used in the more informal conversation and the more formal style demanded in the reading passage. Children are not only aware of when language changes are required, but they can also make these changes. How they feel about changing is what is important. For example, if a child loves his parents yet is told their language is wrong, what choice is there for him?

We see a main function of education in reference to language learning as teaching children to shift styles of speech. For the most part, only one "style" of speech is taught in schools. Of course, every child should have the opportunity to learn this style. But both teachers and students should realize that this is only one of many styles. "School style" would be totally inappropriate in some social contexts.

Multiple negation, lack of subject-verb concord and other points we have defined as stigmatized in this paper are not "wrong" ways. They are merely inappropriate in certain situations. Small as it may seem, the semantic difference between wrong and inappropriate can make a big difference in the attitude expressed to the child. Using the idea of appropriateness, the teacher can teach new forms to a child who uses stigmatized features without degrading his home language.

There have been very few differences found between the speech of Title I and non-Title I students. Yet many educators think they can tell who Title I students are. We, as outside observers, could often identify Title I students by observing the teacher. Some teachers used a different tone of voice and body language conveyed negative attitudes toward the child. We cannot help but wonder if the attitude changes as a result of the teacher's knowing the child is a Title I student. Research has shown that children's school accomplishments and teacher expectations often conform. If a teacher expects a child to be a poor student, the child often fulfills this prophecy. Although extremely subtle, these attitudes have outwardly, great effect. This may be part of the reason why Title I children, for the most part, are "turned off" by school.

XII. CONCLUSION. -- In this concluding section we would like to turn to the questions with which we began this paper in order to see what answers have emerged to them.

(1) Does the speech of fourth graders designated as Title I students differ significantly in any way from that of non-Title I fourth graders? There were no qualitative differences between the speech of Title I and non-Title I children. That is, both Title I and non-Title I children use the same forms, both standard and non-standard. As to quantitative differences, the only significant difference we could find between the two groups was with the -ing variable where Title I children used significantly more of the -in' form than non-Title I children. However, this seems hardly the

basis for setting aside Title I speech as something distinct from non-Title I speech. As to the rest of the variables, Title I children used a few more forms in some cases than nonTitle I children, but with others they used a few less. For the most part, these differences were not significant. More specifically, as to phonology, we noted that Title I children exhibited more of the speech forms characteristic of child language than did non-Title I children. This is simply a matter of developmental maturity, but it may contribute to an image of a Title I child. Overall, there were no major differences in phonology between Title I and non-Title I children. As to grammatical variables, a few more Title I children used the more highly stigmatized forms such as multiple negations than non-Title I children, but the differences in numbers cannot be said to be significant. Title I children seem to be a little more honest in their answers to questions on the linguistic insecurity section of the project.

However, there was one clear difference between Title I and non-Title I children. This had to do with attitudes toward school. Since many of our questions had to do with school, we have a great deal of data on that subject. In general, non-Title I children seem to be more enthusiastic about school and school activities than are Title I children. While non-Title I children described their subjects and their classroom with great detail, Title I children often responded to these sorts of questions with I don't know. Sometimes Title I children became animated talkers only after we switched topic areas to non-school matters such as favorite TV programs. For example, one Title I child responded to questions about school with only three or four word answers, yet she talked freely and uninhibitedly about her father's horse farm once we got off the tiresome subject of school. The differences between Title I and non-Title I children became clearest in response to the questions What is your favorite subject in school? and Why is that your favorite subject? NonTitle I children said:

I like science because I like to work with different things like chemicals.
I like math because I like multiplying.
I like social studies because I get to do projects.

Conversely, Title I children said:

Spelling, 'cause it's easy.
English. I passed that one.
I don't have any favorites.
Recess.

These sorts of data suggest that speech differences are not the major areas of difficulty for Title I children but that something more basic is involved. These responses may also indicate that non-Title I children have better adapted themselves to the school environment and have learned to "play the game" or role of being a student.

As noted earlier, each of the school districts has its own standards for designating Title I recipients. As the standards vary from district to district, there is no such thing as a stereotype Title I child or even

a group of children throughout the whole area that can be identified as Title I children. This discussion of the speech of fourth graders tends to bear witness to that fact.

(2) Are there regional features in the speech of these fourth graders which would handicap their performance on a nationally standardized test? The only item which was widely used throughout the research area was the word soda; this may be of consequence in regards to the vocabulary used on a standardized test. Other forms such as the cousint pronunciation for the word cousin may be regional, as they occurred throughout the research area, but were used by fewer than half of the children interviewed. A number of other terms such as creek~crick and lollipop~sucker are in variable usage throughout the area. There are also a few items such as the let~leave contrast which occurred very infrequently in the corpus, but which may be regional in character. In general, there are few forms that can be described as true regionalisms in the area. Rather, a teacher will have to accommodate the needs of particular children when confronted with a nationally standardized test or textbook as with the occasionally homophonous pair white~wait.

(3) Are there significant speech differences among different schools or school districts? In general, the answer to this question is no. While there were more instances of the use of d for th in Berwick than in other districts and more occurrences of consonant cluster simplification in Bloomsburg, there was no one district which consistently displayed more standard or non-standard features than any other. As could be seen from the tables presented on any one variable, most districts differed from each other by only a few percentage points.

(4) Are there male-female differences in speech among these fourth graders? Here the answer again would have to be no. While boys may have used more of some forms than girls in some cases, in other cases the situation was reversed. In no case were the differences more than a few percentage points, and there were fairly frequent examples of equal numbers of boys and girls using a particular form. While this finding contrasts with many early language studies, where girls were always found to use more standard forms than boys, these results are similar to those found in more recent studies. (cf. Fasold 1972).

All of these findings would take on a greater significance if there were comparable studies available on the speech of younger children and of adults from the same area. Many of the findings contained within this report can be interpreted only in the light of a more general study of the speech of the area. Such a study would be of interest not only to educators but to linguistic researchers as indicators of language change and of expected language development within the area. A study which focused on the families of the children already interviewed would be especially interesting, as it would reveal the intrafamily language dynamics which no doubt have a great influence on the speech the child uses in the classroom. Nevertheless, since there are so few studies of the language of children of fourth grade age, we feel that this study is an important contribution both to education and to English language studies.

APPENDIX A.

Part A. Word Game with Plurals

a. plum

b. dress

c. lun

d. stick

e. house

f. dish

g. church

h. niz

i. sheep

j. can

k. gutch

l. desk

m. shug

n. foot

APPENDIX A.

Part B: Story

THE BEE THAT LOST ITS STING

Once upon a time there was a nest of bees. The bees were very poor. They did not have very much honey because the bears ate it all when the bees were asleep.

One time a bee woke up. He just walked out through the door and saw a mother bear eating the honey and so he got very angry. So he went right up to the bear and got ready to sting her, but the bear was lucky because when the bee came flying up to the bear, on the way the bee lost its stinger.

"Ouch!" The stinger came out with a hurt. The bee had to fly back as quickly as he could before the bear ate him up.

Finally he got back to the nest. All the other bees were in school sitting at their desks. The bee went up to the teacher's desk. And he told the rest of the bees all about it and this is what the bee said:

"I woke up and I tried to sting the bear, but just then I lost my stinger. I had to get back to the nest as fast as I could so the bear would not catch me and eat me. I am going to ask one of you to go out and sting that bear. It is you, Ruth. I don't think you are going to lose your stinger. There is nothing to stop you. I know that you will not lose your stinger. Go and sting that mother bear and you will get a prize."

"Yes, sir," said Ruth. So she started flying out to the honey tree, but the bear was very smart. She knew that the bee was going to be there. So the bee was going to be very smart, because she knew that the bear was going back and forth. So the bee came the next day and found the bear drinking the honey. The bee came up and hid at the bear's toes. The bear did not know the bee was there.

Then suddenly the bee came up closer and closer to the bear's arm. "Ouch!" said the bear and the bear died. And the bees lived happily ever after.

APPENDIX A.

Part C. Word List:

1. ne
2. then
3. cars
4. cards
5. sitting
6. just
7. cousin
8. cousins
9. picture
10. pitcher
11. thought
12. taught
13. white
14. wait
15. fast
16. test
17. nest
18. desk
19. desks
20. fourth
21. catch
22. get
23. wrestle
24. next
25. necks
26. Ruth
27. nothing
28. later
29. leader
30. slipped
31. slept
32. refrigerator
33. there
34. film
35. houses
36. right
37. rate
38. they
39. day
40. going

APPENDIX A.

Interviewer's sheet for Part D. Linguistic Insecurity and Regionlisms.

Interviewer: "I'm going to read two sentences. Listen carefully and then tell me which one you would say."

EX.: "I want a cookie."
"Me want a cookie."

* * * * * * * * * * * * * * * * *

(Questions which may be asked after kid answers:)

Why don't you like the other one?
Which one would your teacher like you to use?

* *

Sentences:

1. She didn't say nothing.
   She didn't say anything.

2. We studied about the heart.
   We studied on the heart.

3. The gorilla seen him.
   The gorilla saw him.

4. I like those meatballs.
   I like them meatballs.

5. You daresn't go home for lunch.
   You can't go home for lunch.

6. We were playing.
   We was playing.

7. My dad don't like too many dogs around.
   My dad doesn't like too many dogs around.

8. The thing they like most is ice cream.
   The most thing chey like is ice cream.

9. It's a ball here.
   There's a ball here.

REFERENCES

Anisfield, M. & Tucker, G.R. English pluralization rules of six-year-old children. Child Development, 1967, 38, 1201-11217.

Berko, Jean. 1958. "The child's learning of English morphology." Word. 14:150-177.

Birren, J.E., and Hess, R. 1968. "Social and biological deprivation influences on learning and performance." In Perspectives on human deprivation: biological, psychological, and social. Washington, D.C.:U.S. Department of Health, Education, and Welfare, National Institute for Child Health and Development.

Brown, Roger. 1973. "Schizophrenia, language, and reality." American Psychologist. May. pp. 395-403.

Chomsky, Carol. 1969. The acquisition of syntax in children from five to ten. Cambridge, Mass.: M.I.T. Press.

Fasold, Ralph W. 1972. Tense marking in Black English. Washington, D.C.: Center for Applied Linguistics.

_____, and Wolfram, Walter. 1970. "Some linguistic features of Negro dialect." In Ralph W. Fasold and Roger W. Shuy, (eds.). Teaching standard English in the inner city. Washington, D.C.: Center for Applied Linguistics.

Fischer, John. 1958. "Social influences on the choice of a linguistic variant." Word. 14: 47-56.

Hunt, Kellogg W. 1970. Syntactic maturity in school children and adults. Monographs of the Society for Research and Child Development Serial No. 134, Vol. 35, No. 1.

Jakobson, Roman. 1968. Child language, aphasia, and phonological universals. The Hague: Moulton.

Joos, Martin. 1968. "Isolation of styles." In Joshua Fishman, (ed.) Readings in the sociology of language. The Hague: Moulton.

Kessell, Frank S. 1970. The acquisition of syntax in children from six to twelve. Monographs of the Society for Research in Child Development, Vol. 36 No. 5.

Labov, William. 1966. The social stratification of English in New York City. Washington D.C.: Center for Applied Linguistics.

_____. 1973. "Where do grammars stop?" Report of the 23rd Annual Roundtable Meeting on Linguistics and Language Studies, Roger W. Shuy, (ed.) Washington, D.C.: Georgetown University Press.

_____. Cohen, Paul, Robins, Clarence, and Lewis, John. 1968. A Study of the non-standard English of Negro and Puerto Rican speakers in New York City. Volume I: Phonological and grammatical analysis. Final Report, U.S. Office of Education Cooperative Research Project No. 3288.

Palermo, David S., and Molfese, Dennis L. 1972. "Language Acquisition from age five onward," Psychological Bulletin Vol. 78, No.6.

Shuy, Roger W., Wolfram, Walter, and Riley, William K. 1967. A study of social dialect in Detroit. Final Report, Project 6-1347. Office of Education: Washington D.C.

Slobin, Dan I. 1971. Psycholinguistics. New York: Scott Foresman.

Sullivan, Jennifer. 1972. "A sociolinguistic review of the Iowa test of basic skills," in William K. Riley and David M. Smith (eds.) Language and Linguistics Working Papers No. 5: Sociolinguistics, Washington, D.C.: Georgetown University Press, pp. 61-75.

Whiteman, Marcia. 1972. "Dialect differences in testing the language of children: a review of the California language tests," in William K. Riley and David M. Smith (eds.) Language and Linguistics Working Papers No. 5: Sociolinguistics, Washington D.C.: Georgetown University Press. pp. 48-60.

Wolfram, Walter. 1969. A sociolinguistic description of Detroit Negro speech. Washington, D.C.: Center for Applied Linguistics.